



UCD School of Mathematics and Statistics Colloquium Seminar

Title: The Caratheodory Conjecture and Beyond

Speaker: Professor Brendan Guilfoyle (Institute of Technology Tralee, Ireland)

Date: Thu 6th June 2019 at 3:00PM

Location: Seminar Room SCN 1.25

Abstract: In this talk we will discuss the Caratheodory conjecture about the number of umbilic points on a smooth convex surface in Euclidean 3-space, and its proof, originally proposed by the speaker and Wilhelm Klingenberg in 2008. Lying at the intersection of geometry, analysis and topology, the various parts of the proof are now appearing in publication. In this talk an outline will be given, together with recent counter-examples in nearly Euclidean 3-spaces. Finally, the resolution of a conjecture of Toponogov using the same techniques will be explored.

<mailto:hermann.render@ucd.ie>